

1/27/94

MATERIAL SAFETY DATA SHEET

No. 1062

5173, 5475, 4791

4790, 4979, 5153

A. P. GREEN INDUSTRIES, INC.
GREEN BOULEVARD, MEXICO, MO. 65265
TELEPHONE NUMBER -- 314-473-3626

SECTION I**PRODUCT NAME:**

GREENPAK-85-P	R-7011	GREENGUN-85 P
GREENPAK-85-PF	R-7011 Plus	GREENGUN-85 P Plus
GREENPAK-85-P Plus	R-2010	GREENPAK-83-MP
GREENPAK-85-PF Plus	R-2010 Plus	GREENPAK-83-MP Plus
GREENPAK-85-P GR	R-2010 GR	GREENPAK-83-P Plus
GREENPAK-85-P GR Plus	R-2010 GR Plus	GREENPAK-83-MP 8
GREENPAK-85-MP	GREENGUN-83 P	GREENPAK-83-MP 8 Plus
GREENPAK-85-MP Plus	GREENGUN-83 P Plus	
GREENPAK-85-MP 8	GREENGUN-83 P Plus M	
GREENPAK-85-MP 8 Plus		

PRODUCT TYPE:

Plastic Refractory

CHEMICAL FAMILY:

SiO₂ = 6-14% Al₂O₃ = 82-90%
 Fe₂O₃ = 1-2% TiO₂ = 2-3%
 Na₂O = <1% P₂O₅ = 3-4%

FORMULA: Not Applicable

Note: The above listed products differ in one or more physical characteristics but are chemically equivalent. Information given in SECTIONS II and IX of this Material Safety Data Sheet applies to each product listed.

SECTION II**PRODUCT HAZARDOUS INGREDIENTS**

<u>CHEMICAL</u>	<u>TLV-TWA</u>	<u>CAS #</u>
Quartz (SiO ₂) (<2%)	0.1 mg/m ³ ** Respirable Dust	14808-60-7
Cristobalite (SiO ₂) (<10%)	0.05 mg/m ³ ** Respirable Dust	14464-46-1
Phosphoric Acid (H ₂ O ₃) (<10%)	1 mg/m ³ ***	7664-38-2 ***
Alumina (Al ₂ O ₃) (<30%)	10 mg/m ³ ** Total Dust	1344-28-1
Graphite* (<2%)	2 mg/m ³ ** Respirable Dust	7782-42-5

* Only in GREENGUN products.

** Source: American Conference of Governmental Industrial Hygienists, 1993-1994.

*** This product contains phosphoric acid, CAS No. 7664-38-2, which is reportable under Section 313 of Title III of SARA and 40 CFR Part 372. For purposes of reporting environmental discharge use 6% phosphoric acid content.

SECTION III**PHYSICAL DATA****SOLUBILITY IN WATER:** Slight**MELTING POINT:** Not Applicable**SPECIFIC GRAVITY:** 3.2-3.4**pH:** 2-4**SECTION IV****FIRE AND EXPLOSION HAZARD DATA****FLASH POINT:** None**EXTINGUISHING MEDIA:** Not Combustible**SPECIAL FIRE FIGHTING PROCEDURES:** None**UNUSUAL FIRE AND EXPLOSION HAZARDS:** The phosphoric acid if heated to decomposition will emit toxic fumes of PO₃.

SECTION V

HEALTH HAZARD DATA

EFFECT OF OVEREXPOSURE:

EYES ACUTE: Dust or aggregate particles can cause mechanical irritation. Phosphoric acid may cause eye injury.
CHRONIC: None known.

SKIN ACUTE: Can cause mechanical abrasion. Phosphoric acid can cause skin injury.
CHRONIC: None known.

INHALATION ACUTE: Dust, if present, may cause upper respiratory irritation.
CHRONIC: Dust may cause lung damage if inhaled on a long-term basis.

INGESTION ACUTE: Unknown.
CHRONIC: Unknown.

FIRST AID PROCEDURES:

EYES Immediately flush eyes with water for 15 minutes. Consult physician if irritation occurs.

SKIN Wash with soap and water. Treat abrasions using normal first aid procedures.

INHALATION Remove to fresh air. Seek medical attention.

INGESTION Contact physician immediately. Do not induce vomiting unless instructed to do so by a physician.

SECTION VI

REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY: None known.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION VII

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Sweep, shovel up, or pick up.

WASTE DISPOSAL METHOD: May be disposed of in an approved landfill, in accordance with local, state, and federal regulations.

SECTION VIII

SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Use NIOSH approved respirator when working around dried material or when removing this product after service.

VENTILATION: General mechanical ventilation is adequate.

EYE PROTECTION: Goggles or safety glasses with side shields should be worn.

OTHER PROTECTION: Use of leather gloves and long-sleeved and long-legged clothing protects hands, arms, and legs from skin contact or abrasion. Safety shoes should be worn to protect feet from accidentally dropped blocks of plastic.

SECTION IX

SPECIAL PRECAUTIONS

Since this product contains phosphoric acid, toxic PO_3 fumes can be formed on burn in.

Warning: This product contains crystalline silica. Prolonged exposure to dust may cause silicosis, a progressive pneumoconiosis, or other respiratory diseases. International Agency for Research on Cancer (IARC) has classified crystalline silica as a Class 2A carcinogen. Their study concluded that sufficient evidence for carcinogenicity exists in experimental animals and that limited evidence for carcinogenicity exists in humans.

NIOSH approved respirators should be worn any time that refractories are torn out after service. While some respiratory hazard and/or nuisance dust may exist from the product itself, other foreign substances may also be present as a result of use conditions. These foreign substances may warrant additional precautions during tearout and disposal.

This MSDS provides the toxic chemical "SUPPLIER INFORMATION" required under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR 372. Toxic chemical information, if applicable to the product(s) named, is located in Section II - HAZARDOUS INGREDIENTS section of the MSDS. This information is subject to the toxic chemical reporting requirements of Section 313 and must be included in all MSDSs that are copied and distributed for this product.

This material safety data sheet contains confidential proprietary information and is not to be disclosed to the general public or to competition except as required by law. The information accumulated herein is believed to be accurate but is not warranted to be, whether originating with A. P. Green Industries, Inc. or not. This information is offered solely for use in your evaluation of this product in respect to safety, health, and environmental hazards.

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Section 1

Section 2

Section 3

Section 4

Section 5

Section 6

Section 7